

Data sheet

Order No.: 1071100

Type: SPTAF 1/ 4-5,0-IL-EXPROFINET 3

PCB terminal block, Push-in spring connection



The figure shows the standard item (without EX marking)

1 Main features



- | | | | |
|---------------------------|---------------------------|------------------------|-------|
| • No. of pos. | 4 | • Nominal current | 16 A |
| • Conductor cross section | 1.5 mm ² | • Nominal voltage | 137 V |
| • Color | green (6021) | • Connection direction | 45 ° |
| • Pitch | 5 mm | • Type of packaging | Tray |
| • Connection method | Push-in spring connection | | |

2 Your advantages

- ✓ Satisfies the requirements of the “Guideline for PROFINET” in the edition dated 05/2017
- ✓ Satisfies CAT5 requirements in accordance with EN 50173 and ISO/IEC 11801
- ✓ Satisfies the more stringent safety requirements of “Ex eb” protection according to IEC 60079-7 for potentially explosive areas
- ✓ Time saving push-in connection, tools not required
- ✓ Defined contact force ensures that contact remains stable over the long term
- ✓ Intuitive use through colour coded actuation lever
- ✓ Small component size for applications where space is at a premium
- ✓ Quick and convenient testing using integrated test option



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It can be downloaded at: phoenixcontact.net/product/1071100

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1071100 SPTAF 1/ 4-5,0-IL-EXPROFINET 3**4 General Technical Data****4.1 item properties**

Order No.	1071100
Type	SPTAF 1/ 4-5,0-IL-EXPROFINET 3
Product type	PCB terminal block
Range of articles	SPTAF 1/...-IL-EX PROFINET
Pitch	5 mm
Range of positions	4...4
Number of positions	4
Number of levels	1
Connection method	Push-in spring connection
Mounting type	Wave soldering
Connection direction of the conductor to the PCB	45 °
Pin layout	Linear double pinning
Solder pins per potential	2

4.2 Connection capacity

Examination certificate	SEV 19 ATEX 0159 U
	0344 ^(Ex) II 2G Ex eb IIC T6...T1 Gb
IECEX certificate	IECEX SEV 19.0026U
Conductor cross section, solid	0.2 mm ² ... 1.5 mm ² (When connecting and possibly adjusting a solid conductor of 1.5 mm ² , the mechanical lateral forces, which can affect the terminal block, have to be absorbed by lateral support.)
Conductor cross section, flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 0.75 mm ²
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm ² ... 0.75 mm ²
Stripping length	8 mm

4.3 Connection capacity AWG

Conductor cross section AWG	24 ... 16
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5 Material properties**5.1 Material of metal parts**

Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Terminal point surface	Tin (2 - 4 μm Sn)
Soldering area surface	Tin (2 - 4 μm Sn)
Surface characteristics	hot-dip tin-plated

5.2 Material of plastic parts

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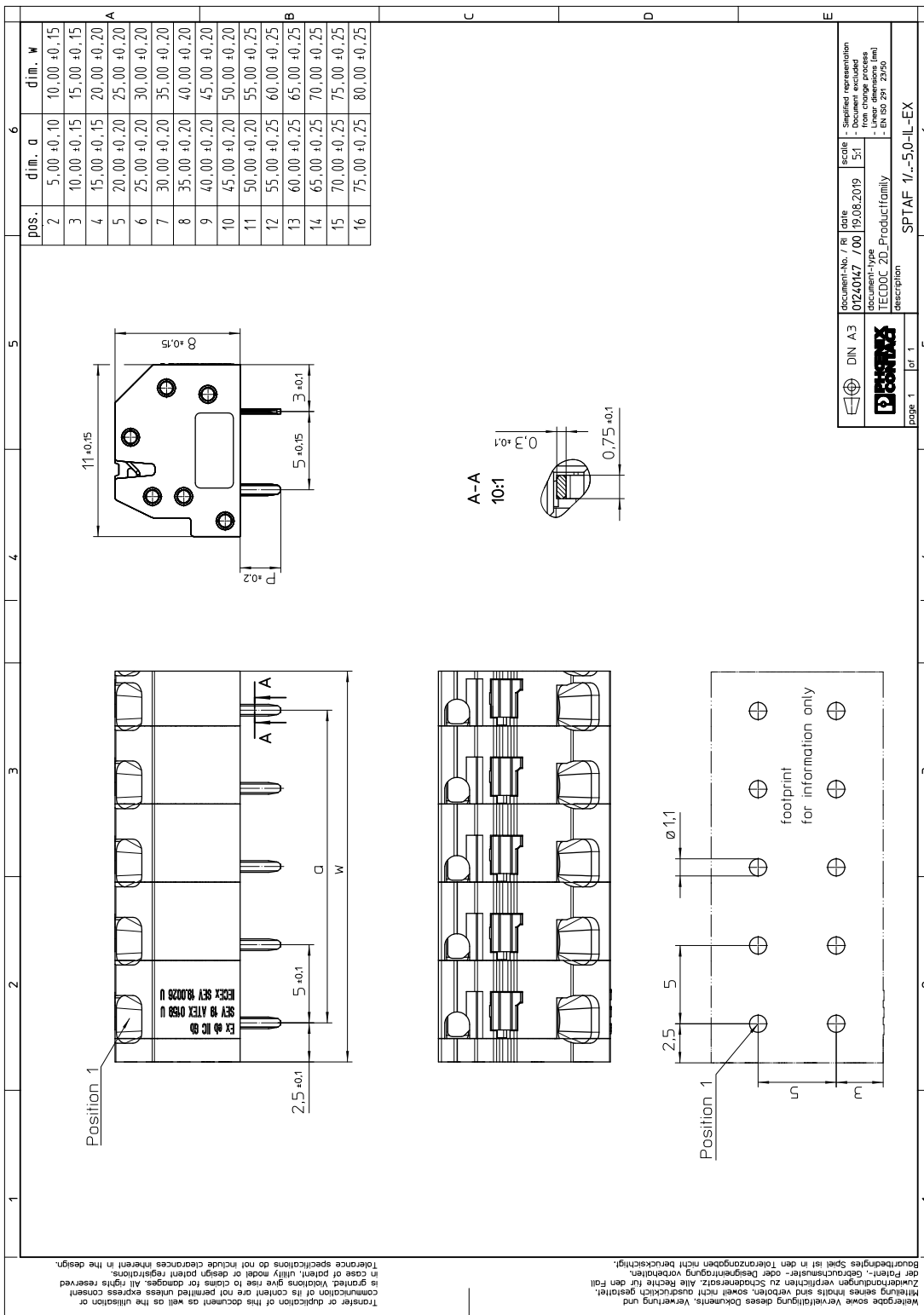
	Housing	Actuation element
Color	green (6021)	orange (2003)
Insulating material	PA	PBT
Insulating material group	I	
CTI according to IEC 60112	600	275
Flammability rating according to UL 94	V0	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850	
Glow wire ignition temperature GWIT according to EN 60695-2-13	775	
Temperature for the ball pressure test according to EN 60695-10-2	125 °C	

1071100 SPTAF 1/ 4-5,0-IL-EXPROFINET 3**6 Dimensions****6.1 Dimensions for the product**

Length	11 mm
Width	20 mm
Height (without solder pin)	8 mm
Total height	10.6 mm
Solder pin [P]	2.6 mm
Dimension a	15 mm

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7 Series drawing



1071100 SPTAF 1/ 4-5,0-IL-EXPROFINET 3**7.1 Dimensions for PCB design**

Hole diameter	1.1 mm
Pin dimensions	0.75 x 0.3 mm

8 Application**8.1 General information**

Note on application	Maximum permissible outer diameter of the wire insulation ≤ 3 mm
Note on Ex protection	Konformitätsbescheinigung und EX-Zertifikate auf Anfrage erhältlich
Note on Ex protection	

9 Packaging information

Type of packaging	Tray
Pieces per package	80

9.1 Temperature limit values

Ambient temperature (storage/transport)	-40 °C ... 70 °C
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 100 °C

1071100 SPTAF 1/ 4-5,0-IL-EXPROFINET 3**10 Mechanical tests****10.1 Pull-out test**

Specification	IEC 60999-1:1999-11
Result	Test passed
Conductor cross section/conductor type/tractive force actual value	0.2 mm ² / solid / > 10 N
Conductor cross section/conductor type/tractive force actual value	0.25 mm ² / flexible / > 10 N
Conductor cross section/conductor type/tractive force actual value	1.5 mm ² / solid / > 40 N
Conductor cross section/conductor type/tractive force actual value	1.5 mm ² / flexible / > 40 N

10.2 Check for damage to conductor or loosening

Specification	IEC 60999-1:1999-11
Result	Test passed

1071100 SPTAF 1/ 4-5,0-IL-EXPROFINET 3**11 Electrical tests****11.1 Electrical data**

Rated current / conductor cross section	16 A / 1.5 mm ²
Rated insulation voltage (III/2)	
Rated surge voltage (III/2)	
Contact resistance	
Degree of pollution	2

11.2 Short-time withstand current test

Specification	IEC 60947-7-4:2013-08
Result	Test passed
Conductor cross section/short-time current	1.5 mm ² / 50.4 A

11.3 Aging test (climatic impact and corrosion testing)

Specification	IEC 60947-7-4:2013-08
Result	Test passed
Contact resistance R ₁	0.8 mΩ / 1.5 mm ²
Test sequence 1: low temperature storage	-40 °C / 2 h
Test sequence 2: heat storage	168 h/100°C
Test sequence 3: noxious gas storage (ISO 6988)	KFW 0.2 S/1 cycle
Contact resistance R ₂	0.9 mΩ / 1.5 mm ²
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs)	4.8 kV
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	2.2 kV

11.4 Mechanical connection test for the PCB terminal block

Specification	IEC 60947-7-4:2013-08
Result	Test passed

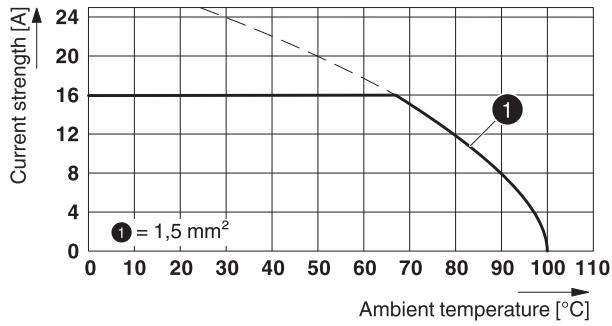
11.5 Temperature rise test

Specification	IEC 60947-7-4:2013-08
Result	Test passed
Requirement temperature-rise test	The sum of ambient temperature and temperature rise of the PCB terminal block shall not exceed the upper limiting temperature.
Conductor cross section/test current/temperature rise	1.5 mm ² / 16 A / 33.5 K

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12 Current carrying capacity/derating curves

Type: SPTAF 1/...-5,0-IL(EL)



1071100 SPTAF 1/ 4-5,0-IL-EXPROFINET 3**13 Environmental and durability tests****13.1 Vibration test**

Specification	IEC 60068-2-6:2007-12
Result	Test passed
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 - 60.1 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis
Note	The connected conductor loops were guided to the test sample at a distance of approx. 10 cm.

13.2 Assessment of fire risk (glow wire test)

Specification	IEC 60695-2-10:2013-04
Result	Test passed
Temperature	850 °C
Time of exposure	5 s

13.3 Shock protection

Specification	IEC 60529:1989-11 + AMD 1:1999-11 + AMD 2:2013-08
Back of the hand protection (Ball ø 50)	guaranteed
Finger protection (movable test finger)	guaranteed
Note	unenclosed basic insulation - protected against finger contact with IP20 test finger in acc. with IEC 60529 when connected, above the PCB

14 Approvals

1071100 SPTAF 1/ 4-5,0-IL-EXPROFINET 3**15 Commercial Data**

Order No.	1071100
Type	SPTAF 1/ 4-5,0-IL-EXPROFINET 3
Pieces per package	80
Net weight	2.613 g
GTIN	4063151101107
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

16 Accessories

Description	Order No.	Type
Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm ² ... 6.0 mm ² , lateral entry, trapezoidal crimp	1212034	CRIMPFOX 6

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